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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,763	05/13/2005	Masako Tanaka	Q72976	8733
23373 7590 09/02/2008 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER MCCRACKEN, DANIEL				
ART UNIT		PAPER NUMBER		
1793				
MAIL DATE		DELIVERY MODE		
09/02/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/534,763

Applicant(s)

TANAKA, MASAKO

Examiner

DANIEL C. MCCracken

Art Unit

1793

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-33 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/5508)
Paper No(s)/Mail Date 5/13/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Citation to the Specification will be in the following format: (S. # : ¶/L) where # denotes the page number and ¶/L denotes the paragraph number or line number. Citation to patent literature will be in the form (Inventor # : LL) where # is the column number and LL is the line number. Citation to the pre-grant publication literature will be in the following format (Inventor # : ¶) where # denotes the page number and ¶ denotes the paragraph number.

Response to Arguments

Priority

This application would appear to be a national stage entry of a PCT filing. *See e.g.* Oath filed 5/13/2005 indicating that this case (10/534,763) claims priority to a PCT filing (PCT/JP2003/014379). Yet, in their specification, Applicants identify allege this is a national application (*i.e.* 35 U.S.C. §111(a) case) versus a national stage application (*i.e.* 35 U.S.C. §371 case). (S. 1: 1-11). The two are similar but not identical. *See* MPEP 201. Which is it?

Until there is consonance between file wrapper and the Specification as to what kind of case this is and what priority Applicants are claiming, priority will not be acknowledged. Appropriate correction/action is expected.

Information Disclosure Statement

With respect to Applicants' IDS, the items crossed off were inadvertently crossed off. It was not entirely clear what the "DATABASE CA CHEMICAL ABSTRACTS SERVICE" documents were. The Examiner presumes that the "XP-abcdefefgh" numbering format on the

abstract indicates that said abstract corresponds to the "DATABASE CA" documents cited on Applicants IDS. An updated IDS reflects that they have been "considered." That said, the Examiner does not read Japanese. Even if he did, many of the copies provided are of such poor quality that little, if anything could be made out. The English portions submitted (i.e. the abstracts) were the only things "considered." Stated differently, if there is material information in the untranslated portion, it was not considered because the translated abstract did not indicate its relevance/materiality. The statement in the non-final office action was made for Applicants benefit. Applicants statement about not being required to give any material documents (translations) to the USPTO is noted. Applicants are of course free to respond as they see fit.

Claim Rejections 35 U.S.C. §112/101

With respect to the rejection of Claim 9, Applicants have amended the claim to recite "non-graphatizable [*sic*] carbon." The passaged that allegedly supports this amendment, (S. 17: 19-28) has little relevance to this amendment insofar as it does not recite "non-graphitizable carbon." The issue then becomes whether addition of this new language is supported by the Specification (*i.e.* does it constitute new matter?).

Applicants provide two pieces of prior art in an attempt to boot-strap the "non-graphitizable" language into the claim. This is proper only if the amendment was made to correct an obvious error. *See e.g. In re Oda*, 443 F.2d 1200, 170 USPQ 268 (CCPA 1971). The Yao thesis was published in 2003, after the priority date of this application. The fact that someone else (Yao) called "something" hard carbon or "non-graphitizable" *after* Applicants application is not probative as to whether it would be viewed as new matter at the time of filing.

As such, the Yao thesis (which appears to be an incomplete submission – only pages 17-20 were provided) has absolutely no relevance to the issue of whether the amendment is proper or not. As Applicants submission was incomplete, the Examiner reserves the right to make additional arguments when/if a full submission is made, as there may be other relevant facts present in the Yao thesis that were not submitted.

Applicants also submit US 6,806,003 to Yamaguchi, et al. as evidence that “hardly-graphatizable [*sic*]” equals “non-grahitizable.” While the cited passage states “hard carbon (nongraphitizable),” this doesn’t address the ultimate issue. Applicants are attempting to replace “hardly” with “non.” “Hardly” implies some graphitizing is permitted. “Non” implies none. Are these the same? Yamaguchi doesn’t remedy this. Furthermore, applicants refer to “so-called hard carbon” in the Specification. (S. 17: 21). Is this the same as the “hard carbon” of Yamaguchi? If “non-graphitizable” truly was the standard term in the art that would permit the amendment Applicants are seeking, then the language would have been there in the first instance. By choosing “hardly,” Applicants made a departure from the allegedly regularly understood meaning, and thus the amendment cannot be viewed as correcting an error.

Stated differently, it is well settled that Applicants can be their own lexicographer. Likewise, Yamaguchi can be his own lexicographer. Applicants have essentially stated “Look, someone else uses the same words we are trying to use, therefore we can make this amendment.” Additional evidence is necessary to determine whether this substitution is proper (*i.e.* would the skilled artisan view it as an obvious error?). Why should “hard carbon” be substituted for “hardly graphitizable,” etc.? Finally, if “hardly” means “non” in Japanese, Applicants’ American counsel should resolve this ambiguity and present appropriate evidence to the Examiner. The Examiner

does not speak or read Japanese. Applicants are in a far better position to educate the Examiner on the nuances of Japanese to English translations. The rejection of Claim 9 is mooted by amendment and WITHDRAWN. However, a new matter rejection appears *infra*.

With respect to the rejection of Claims 13 and 22-23, Applicants allege amendment to these claims. *See* (Remarks of 5/29/2008 at 11) (“Applicant submits that the above amendments in connection with the rejection of these claims under 35 U.S.C. §112 as indefinite overcomes this rejection.”). No amendment was made to Claim 13, as alleged by Applicants. The status identifiers still read “(original).” The rejection is MAINTAINED. Applicants amendment to Claims 22-23 obviate the rejection. Accordingly, the rejection of those claims is WITHDRAWN.

Applicants allege that Claims 24-27 were “objected to.” They were not “objected to.” They were rejected. For clarity in the record, Applicants should take care not to mischaracterize the Office Action again. Applicants’ amendment obviates the *rejection*, and accordingly the *rejection* is WITHDRAWN. These amendments to Claims 24-26 however change the interpretation of the claims to define subject matter that lacks unity of invention under 37 C.F.R. §1.499. Stated differently, the claims are viewed as patentably distinct subject matter versus improper dependent claims. As such, a restriction requirement is made *infra*.

Applicants should note that were these claims properly presented and examined in the first instance (that is, without the 35 U.S.C. §112 ambiguities that precluded a targeted search), they would *not* have been patentable. For example, with respect to Claim 24, slurries of activated carbon are old and known, being employed in a wide variety of applications. *See e.g.* US 6,413,303 to Gelderland at *e.g.* 3: 5 *et seq.* (using an activated carbon slurry as a coating); US 4,633,372 to Calahan at *e.g.* 6: 7 *et seq.* (using an activated carbon slurry in capacitor

manufacture). With respect to Claim 25, activated carbon pastes are equally old and known. *See e.g.* US 5,926,361 to Alford at *e.g.* 2: 54 *et seq.* (noting the use of activated carbon pastes in electrodes). Likewise, with respect to Claims 26, application of activated carbon on an electrode plate (i.e. a surface) in a double layer capacitor is old and known. *See e.g.* US 4,394,713 to at Yoshida 3: 26-42, and accompanying figures (noting the application of activated carbon to electrode plates). Using a commodity (activated carbon) consistent with its known uses would have been obvious to the skilled artisan.

Claim Rejections 35 U.S.C. §102

Applicants have amended Claim 1 to incorporate the limitations of Claim 8 into Claim 1, and therefore the focus of the response is necessarily directed towards Claim 8. Applicants correctly identify principles of inherency were applied to Claim 8. Applicants mischaracterize or misapprehend the nature of the 102/103 rejection. This practice is approved for situations, like here, where the claims recite functions, properties or characteristics not explicitly disclosed in the prior art. *See* MPEP 2112 III. For each rejection applied, a rationale tending to show inherency was articulated accompanied by the requirement that Applicants rebut this articulation. It is this alleged rebuttal that is addressed *infra*.

With respect to US 4,937,223 to Yamaguchi, Applicants present allegations that “the pore distribution of a product may become completely different depending on the materials employed and the activating conditions, even when using the same activating agent.” While attorney argument does not replace evidence where evidence is necessary, this statement alone

indicates why this argument must fail. If – as Applicants have stated on and for the record – the pore distribution can be completely different based on the materials employed, why are activated carbons made from corn cobs (*i.e.* that which is described by Tseng) at all probative to activated carbons made from lignin (*i.e.* Yamaguchi)? Do the two perform the same, especially in light of Applicants' statement?

Likewise with respect to Sato, Applicants present the same arguments as presented with respect to Yamaguchi. If anything, Applicants' rejection falls shorter of the mark in that Sato – like Applicants – discloses using the same starting materials (*i.e.* pitch, resins and the like) as Applicants. *Compare e.g.* (Sato 7: 38 *et seq.*) with (S. 8: 20-33). If an article about corn cob derived activated carbons was relevant to a lignin based activated carbons, it certainly isn't relevant to pitch-derived activated carbons, especially in light of Applicants' statement in their remarks.

In sum, Applicants are comparing apples to oranges – perhaps a Jonathan apple to a Granny Smith apple in one case – but regardless, Applicants themselves state that these are poor comparisons to draw. Evidence that clearly demonstrates that Yamaguchi and Sato could not have the claimed features is more probative than comparison to an article that Applicants themselves *admit* is a poor comparison.

Claim Rejections 35 U.S.C. §103

Applicants argue only Claim 1 in their remarks, that is, they do not “distinctly and specifically point[] out the supposed errors in the examiner’s action.” 37 C.F.R. 1.111(b). As such, it is presumed that the Examiner is correct and any arguments directed to the rejections

under 35 U.S.C. 103 are waived. Applicants again mischaracterize the office action by stating that “[t]he Examiner does not provide any further analysis as to his reasons for this rejection.” (Remarks of 5/29/2008 at 17). Page 10 did in fact provide analysis that went ignored and un rebutted by Applicants. Furthermore, as the Examiner did take official notice and Applicants did not rebut it, the teachings are taken to be admitted prior art. *See* MPEP 2144.03 C.

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

Newly submitted claims 24-26 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

Group I, claim(s) 1-7, 9-23, and 27-33 drawn to activated carbon and methods for making.

Group II, claim(s) 24, drawn to a slurry.

Group III, claim(s) 25, drawn to a paste.

Group IV, claim(s) 26, drawn to an electrode plate.

The inventions listed as Groups I-IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The “special technical feature,” namely activated carbon, is old and known. *See e.g.* US 4,937,223 to Yamaguchi and US 6,414,837 to Sato.

Claims 24-26 now reflect different, properly restrictable subject matter versus improperly drafted dependent claims, as they were originally presented.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 24-26 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Objections

Claim 9 is objected to because of the following informalities: “Graphatizable [*sic*]” (emphasis added) is not a word. There is no allotrope of carbon known as “graphate.” Appropriate correction is required.

Claim Rejections - 35 USC §§ 101, 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

"[N]on-graphitizable" does not have support in the specification. The analysis and remarks set forth in the response to arguments *supra* are expressly incorporated herein by reference.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 13 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 13 provide for the use of activated carbon, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 13 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. The reference teaches each and every limitation of the rejected claims. The pinpoint citations are in no way to be construed as limitations of the teachings of the reference, but rather illustrative of particular instances where the teachings may be found.

Claims 1-7, 9-10, 13-14, and 28-33 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,937,223 to Yamaguchi.

With respect to Claims 1 and 4, Yamaguchi recites an activated carbon comprising an alkaline earth metal compound. (Yamaguchi 2: 35). Any number of BET surface areas within the claimed range are taught. *See* (Yamaguchi “Table 1”). As to Claims 2-3, calcium, magnesium and barium in their hydroxide and carbonate forms are taught. (Yamaguchi 2: 33-38). As to Claim 5, Yamaguchi necessarily teaches a “particle size” of 10 μm or less. Yamaguchi adds the alkaline earth metal via aqueous solution, which reasonably suggests a homogenous mixture. *See* (Yamaguchi 2: 47 *et seq.*). This is the evidence tending to show inherency. As to Claim 6, the range is taught. (Yamaguchi 2: 41-43). As to Claims 7-8 and 10, Yamaguchi discloses pore sizes in the range claimed. (Yamaguchi 4: 29-31). This, along with the surface areas and reagents taught by Yamaguchi necessarily implies the properties claimed. As to Claim 9, whatever carbon is taught in Yamaguchi is expected to be “non-graphitizable” for similar reasons. “[T]he PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on inherency’ under 35 U.S.C. 102, on prima facie obviousness’ under 35 U.S.C. 103, jointly or

alternatively, the burden of proof is the same...[footnote omitted].” The burden of proof is similar to that required with respect to product-by-process claims. *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)). With respect to Claims 13-14, these claims are being interpreted as requiring nothing more than the composition of Claim 1. If this is not the case and additional structural features were intended, this should be explicit in the claim language.

As to Claims 28-33, Yamaguchi teaches mixing the chemical activating agents and heat treating it at the claimed ranges. (Yamaguchi 2: 47 *et seq.*).

It is also noted for the record that the top of column 3 teaches pulverization of what appears to be active carbon then adding water, which would appear to form a slurry.

Claims 1-4, 7, 9-15 and 27-31 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,414,837 to Sato, et al.

With respect to Claims 1-4, Sato teaches activated carbon with calcium carbonate. (Sato 7: 59-60). The claimed BET surface areas are taught. (Sato 7: 35-37). As to Claim 8, the pore sizes are taught. (Sato “Fig. 3”). As to claims 7 and 10, it is expected that Sato teaches the properties claimed, owing to the similarity of the activation agents and BET surfaces taught. Similarly, whatever was meant by Claim 9, it is expected to be taught by Sato – note the similar reagents and heating taught at (7: 38 *et seq.*). “[T]he PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on inherency’ under 35 U.S.C. 102, on prima facie obviousness’ under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same...[footnote omitted].” The burden of proof is similar to that required with respect to product-by-process claims. *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980)

(quoting *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)). As to Claims 11-12, a particle diameter of 30 μm is taught. (Sato 8: 10-11). With respect to Claim 13-14 and 22-23 and 27, these claims is being interpreted as requiring nothing more than the composition of Claim 1. If this is not the case and additional structural features were intended, this should be explicit in the claim language. However, it is noted that Sato teaches electrodes and double layer capacitors. *See e.g.* (Sato 5: 19 *et seq.*, "Fig. 1"). Not also, Sato discloses electrolytic liquids (i.e. solutions). *See e.g.* (Sato 6: 35 *et seq.*) As to Claim 15, carbon fibers are taught. (Sato 8: 17).

As to Claims 28-33, Sato teaches a process for making activated carbon at the claimed temperatures with the chemical activation agents. *See* (Sato 7: 38 *et seq.*). There is nothing remarkable about how the claimed activated carbon is made. To the extent Applicants intended Claim 29 to reflect the addition of a vapor, it does not read this way. It is expected any alkali metal vapors will evolve form the heat treatment of Sato, rendering the claim anticipated.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. The references cited teach each and every limitation of the rejected claims. The pinpoint citations are in no way to be construed as limitations of the teachings of the reference, but rather illustrative of particular instances where the teachings may be found. As to the rejection under 35 U.S.C. §§ 102/103, where the applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the Examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection. *See* MPEP 2112 III. (discussing 102/103 rejections).

As to the third *Graham v. Deere* inquiry, resolving the ordinary level of skill in the art, the Examiner resolves the level of skill to be high – presumably a PhD chemist or chemical engineer with extensive experience in activated carbon. The Examiner makes note of Applicants use of nanotechnology (i.e. carbon nanotubes) which itself is a highly developed and specialized field. The cross-disciplinary nature of this invention (activated carbon, nanotubes, electrodes, etc.) buttresses the finding that the level of ordinary skill in the art is high. Support for these findings can be found in any of the references submitted by Applicants on their IDS, or those of record.

Claims 1-7, 9-10, 13-14, and 28-33 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US 4,937,223 to Yamaguchi.

The preceding discussion of Yamaguchi accompanying the anticipation rejection *supra* is expressly incorporated herein by reference. See above with respect to 102/103 rejections.

Claims 1-4, 7, 9-15 and 27-31 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US 6,414,837 to Sato, et al.

The preceding discussion of Sato accompanying the anticipation rejection *supra* is expressly incorporated herein by reference. See above with respect to 102/103 rejections.

Claims 1-7, 9-15 and 24-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,414,837 to Sato, et al.

The preceding discussion of Sato accompanying the anticipation rejection *supra* is expressly incorporated herein by reference. With respect to Claim 5, to the extent Sato may not teach the claimed particle size, one of ordinary skill in the art would readily recognize a smaller particle as an obvious expedient to aid in dispersing the activating agent with the carbonaceous substance. It is noted that Sato recites “uniformly impregnate[ing]” the carbonaceous material. (Sato 7: 56).

Claims 1-7 and 9-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,414,837 to Sato, et al. in view of US 7061749 to Liu, et al., US 6,842,328 to Schott, et al., US 6,491,789 to Niu, US 6,454,816 to Lee, et al., and US 6,205,016 to Niu.

The preceding discussion of Sato accompanying the obviousness rejection *supra* is expressly incorporated herein by reference. It is emphasized that activated carbon with the claimed alkaline metals are taught as being useful for electrodes. As to the limitations regarding adding carbon nanotubes/fibers, the Examiner is taking official notice that the use of nanotubes and/or fibers in capacitors is old and known. In support of taking official notice (i.e. in making sure there is “substantial evidence” on the record), the Examiner provides the following:

- US 7,061,749 to Liu, et al. – (3: 38 *et seq.*) (noting the use of nanotubes).
- US 6,842,328 to Schott, et al. – “Abstract” (noting nanotubes as “capacitor enhancing,” activated carbon is also taught).
- US 6,491,789 to Niu – “Abstract” (teaching nanofibers as advantageous for the performance of the capacitor).
- US 6,454,816 to Lee, et al. – (4: 5 *et seq.*) (describing the effect of CNT surfaces on capacitance).
- US 6,205,016 to Niu – (6: 64 *et seq.*) (describing nanofibers as exhibiting electrical capacitance as well as providing a structural framework for the electrode).

Thus, for any number of reasons as noted above and elsewhere in the references of record, carbon nanotubes are taught as advantageous in electrode compositions. To the extent there is not ample motivation to add carbon nanofibers (which are known capacitors) to activated carbon (another known capacitor), “[i]t is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art.” *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) (citations omitted).

With respect to the specific properties, the diameters and aspect ratios claimed are unremarkable (i.e. the range covers just about every nanotube described in the art). Similarly, the surface areas described in the art. *See e.g.* (Niu ‘016, 14: 60). As to Claim 20, Niu ‘016 (among others) teaches that different amounts of fibers/nanotubes has an effect on any number of properties: density, resistance, capacitance, etc. *See* (Niu ‘016, 19: 20 *et seq.*, col 21-22 “Table”). Stated differently, nanotube content is a result effective variable, the optimization of which does not impart patentability. *See In re Boesch*, 205 USPQ 215, 219 (CCPA 1980). As to Claim 21, given the heat treatment describe by Niu, it is expected that “fusion bonding” occurs.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

All amendments made in response to this Office Action must be accompanied by a pinpoint citation to the Specification (i.e. page and paragraph or line number) to indicate where Applicants are drawing their support.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel C. McCracken whose telephone number is (571) 272-6537. The examiner can normally be reached on Monday through Friday, 9 AM - 6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daniel C. McCracken/

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